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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Confirmation No. 3379

Mitsuaki OSHIMA et al.

: Docket No. 2000\_1422

Serial No. 09/686,466

: Group Art Unit 2634

Filed October 12, 2000

: Examiner A. Le

COMMUNICATION SYSTEM

:

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AMENDMENT

Assistant Commissioner for Patents,  
Washington, D.C.

THE COMMISSIONER IS AUTHORIZED  
TO CHARGE ANY DEFICIENCY IN THE  
FEES FOR THIS PAPER TO DEPOSIT  
ACCOUNT NO. 23-0975

Sir:

In response to the Office Action of December 23, 2003, please amend the above-identified U.S. patent application as follows:

IN THE CLAIMS:

Please cancel claims 22-29 without prejudice or disclaimer to the subject matter therein.

Please add claims 30-37 as follows:

30. A signal transmission apparatus comprising:

- a modulator operable to modulate a carrier wave with an input signal to produce a modulated signal, and

- a transmitter operable to transmit the modulated signal,

said input signal containing a first data stream including g values of bit patterns and a second data stream, where g is an integer number, and

the modulated signal having symbols, each of which representing one of m signal points in a vector space diagram, where m is an integer number and the vector space diagram includes an I axis and a Q axis extending in directions perpendicular to each other,

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